WDNR Sharp-tailed Grouse Advisory Committee Meeting
Meeting Minutes
June 13, 2019
Black River Falls DNR Office
910 Hwy 54 E
Black River Falls, WI 54615

Attendance

- Mark Witecha, DNR-WM
- Alaina Gerrits, DNR-WM
- Eric Peterson, DNR-FR
- Bob Hanson, DNR-WM
- Mike Amman, Bayfield County Forest
- Mike Gullickson, Wisconsin Conservation Congress (WCC)
- Nancy Christel, WDNR-WM
- Daniel Eklund, Chequamegon-Nicolet National Forest (CNNF/USFS)
- Dave Evenson, Wisconsin Sharp-tailed Grouse Society (WSGS)
- Chris Pollentier, WDNR-OAS

Recap of the STGR Conference at Crex Meadows May 29-30, 2019

- The purpose of the conference was to report on WI & MN STGR research and management updates
- All presentations will become available on the North American Grouse Partnership website soon
- A presentation on genetics led to several WDNR staff calling for a need to conduct genetic analysis on feathers collected from leks and harvested birds to see if WI birds are dispersing and intermixing with MN birds across the St Croix river as well as between WI subpopulations
    - Should be relatively simple to deploy as many feathers have already been collected, would need to send samples to wildlife research lab for analysis
- Several topics discussed included:
    - At what scale (landscape or otherwise) should we be managing STGR and measuring management goals?
    - How often and how far are STGR dispersing? MN study found in unsuitable and fragmented habitat STGR will search for new habitat miles away
    - STGR as an edge avoidance and area sensitive species requiring vast tracts of open land (~5-10,000 acres mostly contiguous)
    - WI is only managing for open barrens habitat in ~10% of historical barrens range
    - STGR numbers in Minnesota are also declining, especially in the East-Central region of the state (<~1000)
        - Due to habitat loss especially due to development
    - MN research on genetics and genetic rescue
        - Genetic rescue efforts may not be as effective as previously thought

        - Prairie chicken introductions in WI from MN saw that after ~5 years all MN genetics had disappeared from the population
        - Overall habitat loss is impacting these populations more than genetic inbreeding/depression
        - Recent studies have found that WI grouse still have good genetics even considering isolated subpopulations
    - MN research on neonicotinoids found upland game birds often ingest waste/spilled neonicotinoid treated seeds
    - Snapshot WI
        - Preliminary success, getting lots of pictures of STGR on leks
        - At the very least snapshot will be able to supplement traditional STGR lek surveys

2018 Harvest and Hunter Survey Results

- 205 applicants for 25 permits in GMU 8 in 2018, 11 birds were harvested, 18 hunters participated
- The season ran from October 20 – November 11
- 44% success, not corrected for non-participating hunters, once censored for non-participants, success = 61%
- Committee suggested that in next survey there should be several questions added:
    - How many birds did you shoot but were unable to recover (wounding loss)?
    - Did you use dogs on your hunt?
    - If you were drawn for a permit and chose not to hunt, why?
    - Which property did you hunt on?
    - How do you perceive the health of the STGR population in WI?
    - Committee suggested there may be a need for a comprehensive hunter survey (similar to what was just conducted for RUGR hunters), could shed light on in-depth attitudes/behaviors
- Average hunter had 1.5 hunting trips/season, 3 hours spent/trip and flushed ~30 birds on average per season
- Average hunter had ~3 opportunities to shoot
- Overall hunter satisfaction was 4.67/5

2019 Lek Survey Data

- Important to note that 75% of unknown birds on leks were identified as males for population estimates
- Overall on managed properties grouse numbers are up 38% from last year
- On unmanaged properties grouse numbers are down 12% from last year
- On all properties STGR numbers increased 19% with 206 total grouse detected in 2019

Population Viability Analysis (PVA) with Harvest Component

- PVA's allow wildlife researchers to measure how small populations react to hunting, pollution, disease, and other threat factors overtime using simulations
- Data needed to conduct a PVA: count based data from consecutive years to derive a continuous growth rate, variation between years and carrying capacity

- For this PVA Namekagon WA data were used because it has the "most stable" population and it is where most recent hunting has occurred
    - Assumptions of model: harvest is unchanged, landscape will remain unchanged, sex ratios are 50/50, carrying capacity remains the same, no natural mortality occurs from spring to fall hunting season
- 10,000 different simulated populations x 10,000 different times for 50 years into the future combined with non-parametric bootstrapping – creates a robust dataset
- This model predicted the probability of quasi extinction
    - Quasi extinction = <20 breeding hens available
    - 3 different scenarios= same level of harvest, 1 more female harvested, 5 more females harvested
- At current harvest levels there is a ~20% probability of quasi-extinction after 50 years (best case scenario- lower confidence interval)
- With 1 more hen harvested there is ~25% probability of quasi-extinction after 50 years (best case scenario- lower confidence interval)
- With 5 more hens harvested there is a ~40% probability of quasi extinction after 50 years (best case scenario- lower confidence interval)
- Things to consider:
    - There is a huge variation between upper and lower confidence intervals, regardless the "best case" scenario is changed significantly with increased hen harvest
    - This model is likely conservative as it assumes no mortality from natural causes/predation/disease between spring counts and fall harvest

Harvest/Permit Allocation 2019 Season?

- Some Committee members expressed that DNR should only be handing out harvest permits for species they are confident can support a harvest
- Prairie chickens and spruce grouse have higher or similar population levels but there are no open seasons on either of these species and there is public support for their management
- How many STGR are being accidentally harvested by RUGR hunters? (Not accounted for in harvest formulae)
    - Committee suggested perhaps there could be some way to report incidental STGR harvest in same way trappers can report incidental take
- Other biological concerns:
    - In recent STGR study it was found 5/6 hens nested, 4 hatched but 0 broods survived, production may be low
    - Grouse are highly susceptible to the effects of climate change; wet springs have not been beneficial for brooding
    - Although there was an increase in STGR this year, it is important to look at overall trends compared to year to year trends especially when looking at percent increases/declines year to year in such a small population
- Formulae suggested permits:

    - 30 for unit 2
    - 132 for unit 8
    - 46 for unit 9
    - 42 for unit 10
- Our committee suggested:
    - 0 permits for units 2, 8, 9, &10
    - It was a **unanimous vote that no STGR permits should be allocated to any units for the 2019 season** as results of the PVA raise serious concerns for the long-term viability of the STGR population

New STGR Management Plan to be drafted in 2021

- Suggestions for information to be included in upcoming management plan:
    - Genetic analysis (to show how effectively WI/MN birds are dispersing/mixing)
    - In depth hunter survey investigating hunter attitudes/behaviors
    - A research proposal has been submitted to the Wildlife Leadership calling for more research on STGR, specifically a radio-telemetry study that will help define STGR demography to form better inform acceptable harvest levels and overall management
        - Information needed on brood survival, population limiting factor, harvest impacts
    - Committee also expressed desire to capture the attitudes/behaviors of non-consumptive users (i.e.- bird watchers, people who travel to view leks) to show hunters are not the sole source of support for the species
    - Committee suggested a communications effort should be deployed because there are so many people in WI who don't even know we have STGR and because barrens are a globally important threatened habitat, ideas:
        - Education packets
        - Social media posts
        - Advertise lek viewing
        - Presentations at WI Conservation Congress Meetings
        - Lek cameras
        - Podcasts
    - BMPs for barrens habitat with details on landscape scale management
    - Permit setting formulae needs to be re-evaluated
        - Current formulae include assumptions about production that may not be accurate as they're based off studies of much larger, healthier populations
        - Perhaps the threshold of <25 males = no permits should be raised
    - STGR is going to be reviewed in 2020 to see if it should be listed as state-threatened (right now it is a species of concern)

Partner Updates

- WDNR- WM Office of Applied Science
    - Ruffed Grouse West Nile Virus (WNV) results are expected in late summer
        - Hunters with left over sampling kits are encouraged to use it this year

    - No evidence suggests STGR are being negatively affected by WNV but RUGR test results could shed some light on the prevalence of the disease
        - However, chick mortality due to WNV has the potential to impact small STGR populations more negatively than RUGR populations
    - Research proposal to conduct several year STGR study to be reviewed by wildlife leadership team in the coming months
- WI Sharp-tailed grouse society
    - Meeting next week, information from today's meeting will be shared with the group
- WDNR- Forestry
    - All county forests are currently re-writing 15-year management plans and are available for public comment now
    - Doug Brown is a contact for submitting public comments
- UFS- Chequamegon-Nicolet National Forest
    - Burned 7200 acres so far this year, 500 left to go!
- WDNR-WM Central Office
    - Advisory committee suggestions will be relayed to wildlife leadership team next week